L10 ANSWER 26 OF 34 CAPLUS

ACCESSION NUMBER: 1994:29126 CAPLUS
DOCUMENT NUMBER: 120:29126

TITLE: Effects of IL-13 on phenotype, cytokine **production**, and cytotoxic function of **human** monocytes. Comparison with IL-4 and modulation by IFN-.gamma. or IL-10

AUTHOR(S): Malefyt, Rene de Waal; Figdor, Carl G.; Huijbens, Richard; Mohan-Peterson, Sheela; Bennett, Bruce; Culpepper, Janice; Dang, Warren; Zurawski, Gerard; de Vries, Jan E.
CORPORATE SOURCE: Dep. Hum. Immunol., DNAX Res. Inst. Mol., Palo Alto, CA, 94304-1104, USA

SOURCE: J. Immunol. (**1993**), 151(11), 6370-81 QR180.J6
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LANGUAGE: English

AB Recently, the authors described the cloning and expression of a **human** cDNA which is the **homolog** to P600, a gene transcribed by **mouse** Th2 clones. Based on its activities on **human** monocytes and B cells, this gene was designated IL-13. In the present study the authors investigated the effects of IL-13 alone or in combination with IL-4, IFN-.gamma., or IL-10 on **human** monocytes. IL-13 induced significant changes in the phenotype of monocytes. Like IL-4, it enhanced the expression of CD11b, CD11c, CD18, CD29, CD49e (VLA-5), class II MHC, CD13, and CD23, whereas it decreased the expression of CD64, CD32, CD16, and CD14 in a dose-dependent manner. IL-13 induced up-regulation of class II MHC Ag and its down-regulatory effects on CD64, CD32, and CD16 expression were prevented by IL-10. IFN-.gamma. could also partially prevent the IL-13-induced down-regulation of CD64, but not that of CD32 and CD16. However, IL-13 strongly inhibited spontaneous and IL-10- or IFN-.gamma.-induced ADCC activity of **human** monocytes toward anti-D coated Rh+ erythrocytes, indicating that the cytotoxic activity of monocytes was inhibited. Furthermore, IL-13 inhibited prodn. of IL-1.alpha., IL-1.beta., IL-6, IL-8, IL-10, IL-12 p35, IL-12 p40, macrophage inflammatory **protein**-1.alpha., granulocyte/macrophage-CSF, granulocyte-CSF, IFN-.alpha., and TNF.alpha. by monocytes activated with LPS. In contrast, IL-13 enhanced the prodn. of IL-1ra by these cells. Similar results on cytokine prodn. were obsd. or have been obtained with IL-4. Thus IL-13 shares most of its activities on **human** monocytes with IL-4, but no additive or synergistic effects of IL-4 and IL-13 on **human** monocytes were obsd., suggesting that these cytokines may share common receptor components. Taken together, these results indicate that IL-13 has anti-inflammatory and important immunoregulat

L10 ANSWER 16 OF 34 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 96:893046 SCISEARCH
THE GENUINE ARTICLE: VV467
TITLE: A functional interleukin 12 receptor complex is composed of two beta-type cytokine receptor subunits
AUTHOR: Presky D H; Yang H; Minetti L J; Chua A O; Nabavi N; Wu C Y; Gately M K; Gubler U (Reprint)
CORPORATE SOURCE: HOFFMANN LA ROCHE INC, DEPT INFLAMMAT AUTOIMMUNE DIS, 340 KINGSLAND ST, NUTLEY, NJ 07110 (Reprint); HOFFMANN LA ROCHE INC, DEPT INFLAMMAT AUTOIMMUNE DIS, NUTLEY, NJ 07110
COUNTRY OF AUTHOR: USA
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (**26 NOV 1996**) Vol. 93, No. 24, pp. 14002-14007.
Publisher: NATL ACAD SCIENCES, 2101 CONSTITUTION AVE NW, WASHINGTON, DC 20418.
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ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We have identified a cDNA from a **human** phytohemagglutinin-activated lymphoblast library encoding a **protein** that binds I-125-labeled **human** interleukin 12 (I-125-huIL-12) with a K-d of about 5 nM when expressed in COS-7 cells, When coexpressed in COS-7 cells with the previously identified IL-12 beta receptor (IL-12R beta) **protein**, two classes of I-125-huIL-12 binding sites were measured with K(d)s of about 55 pM and 8 nM, corresponding to the high- and low-affinity binding sites seen on phytohemagglutinin-activated lymphoblasts, This newly identified huIL-12R subunit is a member of the cytokine receptor superfamily, with closest resemblance to the beta-type cytokine receptor gp130 and the receptors for leukemia inhibitory factor and granulocyte colony-stimulating factor, Consequently, we have reclassified the previously identified IL-12R beta subunit as huIL-12R beta 1 and designated the newly identified subunit as huIL-12R beta 2, huIL-12R beta 2 is an 862-amino acid type I transmembrane **protein** with a 595-amino-acid-long extracellular domain and a cytoplasmic tail of 216 amino acids that contains three tyrosine residues, A cDNA encoding the **mouse homolog** of the huIL12R beta 2 **protein** has also been isolated, **Human** and **mouse** IL-12R beta 2 proteins show a 68% amino acid sequence identity, When expressed in COS-7 cells, huIL-12R beta 2 exists as a disulfide-linked oligomer with an apparent monomeric molecular weight of 130 kDa, Coexpression of the two identified IL-12R subunits in Ba/F3 cells conferred IL-12 responsiveness, and clones of these cotransfected Ba/F3 cells that grew continuously in the presence of IL-12 were isolated and designated LJM-1 cells, LJM-1 cells exhibited dose-dependent proliferation in response to huIL-12, with an ED(50) of about 1 pM huIL-12, Interestingly, Ba/F3 cells transfected with IL-12R beta 2 alone proliferated In response to huIL-12 with an ED(50) of about 50 pM, although a role for endogenous **mouse** IL-12R beta 1 in IL-12 signal transduction in these transfectants cannot be ruled out, These results demonstrate that the functional high-affinity IL-12R is composed of at least two beta-type cytokine receptor subunits, each independently exhibiting a low affinity for IL-12.

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L10 ANSWER 15 OF 34 MEDLINE DUPLICATE 4

ACCESSION NUMBER: 97140286 MEDLINE
DOCUMENT NUMBER: 97140286 PubMed ID: 8986768

TITLE: Identification of a novel selD **homolog** from eukaryotes, bacteria, and archaea: is there an autoregulatory mechanism in selenocysteine metabolism?.

AUTHOR: Guimaraes M J; Peterson D; Vicari A; Cocks B G; Copeland N G; Gilbert D J; Jenkins N A; Ferrick D A; Kastelein R A; Bazan J F; Zlotnik A
CORPORATE SOURCE: Department of Molecular Biology, DNAX Research Institute of
Molecular and Cellular Biology, Palo Alto, CA 94304, USA.

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AB Escherichia coli selenophosphate synthetase (SPS, the selD gene product) catalyzes the **production** of monoselenophosphate, the selenium donor compound required for synthesis of selenocysteine (Sec) and seleno-tRNAs. We report the molecular cloning of **human** and **mouse** homologs of the selD gene, designated Sps2, which contains an in-frame TGA codon at a site corresponding to the enzyme's putative active site. These sequences allow the identification of selD gene homologs in the genomes of the bacterium Haemophilus influenzae and the archaeon Methanococcus jannaschii, which had been previously misinterpreted due to their in-frame TGA codon. Sps2 mRNA levels are elevated in organs previously implicated in the synthesis of selenoproteins and in active sites of blood cell development. In addition, we show that Sps2 mRNA is up-regulated upon activation of T lymphocytes and have mapped the Sps2 gene to **mouse** chromosome 7. Using the **mouse** gene isolated from the hematopoietic cell line FDCPmixA4, we devised a construct for **protein** expression that results in the insertion of a FLAG tag sequence at the N terminus of the SPS2 **protein**. This strategy allowed us to document the readthrough of the in-frame TGA codon and the incorporation of 75Se into SPS2. These results suggest the existence of an autoregulatory mechanism involving the incorporation of Sec into SPS2 that might be relevant to blood cell biology. This mechanism is likely to have been present in ancient life forms and conserved in a variety of living organisms from all domains of life.